



### **DoD Executive Agent**

Office of the Assistant Secretary of the Army (Installations and Environment) The Fully-Burdened
Cost of Waste in
Contingency
Operations

Dr. Marc Kodack, AEPI

The NDCEE is operated by:



maintaining the data needed, and of including suggestions for reducing	lection of information is estimated to completing and reviewing the collect this burden, to Washington Headqu uld be aware that notwithstanding ar DMB control number.	ion of information. Send comments arters Services, Directorate for Information	regarding this burden estimate or mation Operations and Reports	or any other aspect of the 1215 Jefferson Davis	nis collection of information, Highway, Suite 1204, Arlington	
1. REPORT DATE JUN 2010	2 DEDORT TYPE			3. DATES COVERED <b>00-00-2010 to 00-00-2010</b>		
4. TITLE AND SUBTITLE				5a. CONTRACT NUMBER		
The Fully-Burdene	5b. GRANT NUMBER					
				5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S)				5d. PROJECT NUMBER		
				5e. TASK NUMBER		
				5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)  National Defense Center for Energy and Environment (NDCEE), Concurrent Technologies Corporation, 100 CTC Drive, Johnstown, PA, 15904				8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)		
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAIL  Approved for publ	LABILITY STATEMENT ic release; distributi	on unlimited				
	otes DIA Environment, I 10 in Denver, CO. U	•	• '	, v <u>-</u>	um & Exhibition	
14. ABSTRACT						
15. SUBJECT TERMS						
16. SECURITY CLASSIFIC	17. LIMITATION OF	18. NUMBER	19a. NAME OF			
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified	Same as Report (SAR)	OF PAGES <b>7</b>	RESPONSIBLE PERSON	

**Report Documentation Page** 

Form Approved OMB No. 0704-0188



## Background



- 2010 National Defense Authorization Act
- Health effects of open-air burning on military personnel
- Tool to select "best" technology for waste management



# **Project Goals**



- Better manage solid, hazardous, and medical waste overseas
  - Create method to calculate the fully burdened cost
  - Draw on fuel and water fully burdened cost project methods



## **Pilot Objectives**



- Build on lessons learned from Iraq and Afghanistan
- Develop method to calculate fully burdened cost
- Ensure easy transfer to potential users and stakeholders
- Demonstrate methods with unclassified data and scenarios



## Recommendations



- Validate method with additional data
- Host roundtable with DoD personnel
  - Share information
  - Choose consistent cost metrics
  - Consider other management tools to increase efficiency
  - Examine implications of combining existing tools/approaches

### Sustain the Mission Project Methodology: Fully Burdened Cost of Fuel Resource Components

DRAFT Fully Burdened Cost of Waste Management
Resource Components
(at a Mature Base Camp)

**Force Protection** 

**Transport** (Military/Contractor)

**Energy Support Military Personnel in BCT** 

**Energy Support Materiel in BCT** 

**Sustainment Brigade/Theater Support Command** 

**Energy Commodity** 

**Garrison Facilities** 

**Security** 

**Waste Transport (Military/Contractor)** 

**Waste Management Support Personnel** 

**Waste Management Support Equipment** 

No equivalent

**Waste Volume Generated** 

**Base Camp Waste Management Infrastructure** 





### **Points of Contact**





#### **DoD Executive Agent**

Office of the Assistant Secretary of the Army (Installations and Environment)

www.ndcee.ctc.com

Marc Kodack
Army Environmental Policy Institute
703-604-2310
marc.kodack@us.army.mil

Elizabeth Keysar
Concurrent Technologies Corporation (*CTC*)
(770) 631-0137
keysare@ctc.com

This work was funded in part through the Office of the Assistant Secretary of the Army (Installations and Environment) and conducted in part under contract W91WAW-09-D-0022 Task 0609. The views, opinions, and/or findings contained in this paper are those of the author and should not be construed as an official Department of the Army position, policy, or decision unless so designated by other official documentation.